

Adharchandra Mookerjee Lectures for 1944

ARCHAEOLOGY IN INDIA TODAY

BY

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CALCUTTA UNIVERSITY
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It is usual for the polite lecturer on these formal occasions to express his diffidence in the presence of an audience and an opportunity of so august a character. My own reaction is frankly one of unmitigated pleasure; for you have given me a distinguished opportunity to preach a subject in which I have faith to a University which, by its liberal support of that subject, has given me renewed courage. It is therefore without any show of reluctance that I stand before you in the honourable guise of your Adharchandra Mookerjee Lecturer.

Let me begin with first things: what is this science called Archaeology? Of what service to the community is a Government Department of Archaeology? Are we of the Archaeological Survey mere proppers-up of decayed buildings, mere chowkidars who share with the jackal and the picnicker the desolation of dead cities and derelict tombs? Of what use are we or the archaic studies to which we adhere? I will try very briefly to tell you.

* The first of the two lectures is here printed. The second lecture, dealing with current and impending fieldwork, will be published elsewhere in expanded form at a later date.

At the present moment something like three thousand ancient buildings and sites come, in one fashion or another, under the control of my Department. These so called "monuments" extend from the North West Frontier to the Coromandel Coast, from Malabar to Assam. Amongst them are numbered a majority of the greatest surviving material products of the Indian genius of Indian mind and sensibility reacting at diverse periods to diverse needs and conditions. In the aggregate, each set of needs and conditions is unique, unlikely ever to recur and the successive reactions of the intelligence constitute likewise, therefore a series of unique episodes in the history of human thought and expression. History never repeats itself. Properly understood, it will be found to possess a continuity, a rhythm, determined by sustained or recurring factors such as climate, soil, "race," invention, and to these objective factors must be added a less definable continuum in the native functioning of the mind. But the chance of the recurrence from one age to another of all factors in identical measure is mathematically so unthinkable as to be of no account.

These monuments then—whether Taj Mahal or Indus city, Sanchi tope or Pallavan rock sculpture—are unique and irreplaceable memorials of the Indian mind in varying circumstance. As such they cannot die. No honest product of the Indian genius can ever lose altogether its informing spirit. The material heritage of Indian culture is no fossil skeleton, it is a living heritage, so much alive

that, scarred and dismembered though it often be, it still breathes out bravely something of the soul that gave it being. In valuing and cherishing these relics of the past, we are thus no mere collectors and wardens of bygone curios. We are valuing and cherishing some part of an undying, vital intelligence which lives on into the present and will help to make tomorrow. There is no true line of cleavage between the past, the present and the future. They form a single, integral phenomenon, no part of which is fully significant without the others.

Today we are preoccupied with material things : killing, saving life, food-production, technical education. These things have, for good or ill, a compelling influence upon our daily lives. They all relate to primary needs or impulses and are therefore easy to understand. No one can doubt the value of a college of engineering, a medical school, a faculty of agriculture. But whilst we are bridging rivers, healing the sick and feeding the hungry, it is occasionally necessary to remind ourselves that there is still something left to do. Indeed, there is almost everything left to do. These things which I have mentioned are not, or should not be, the book of life ; they are merely its introduction. Some of us present may have listened not long ago to that stirring exhortation which Sir Sarvapalli Radhakrishnan addressed to the University Convocation at Patna. He said :

“ In the ancient system of education the three main aims of life were recognised. We are producers, citizens, and men

or human beings. We all need to make a living the best that conditions allow. We all live in a society and so should be good members of it. We require a scale of values, an idea of the good life. The *efficiency* of a community depends on the vocational or technical training given to its members, its *cohesion* on the civic and social virtues cultivated by its members, and its *quality* on the spiritual direction, the *sense* of values adopted by the society. The main purpose of education is not exhausted by the first two, by the acquisition of knowledge and technical skill or the social virtues. There is a hunger which will not be appeased by these.

That hunger is for things of the spirit or, as I prefer to put it, less metaphysically, for things of the mind. Today we have, as never before in human time, most of the mechanism for intelligent living, only we lack the intelligence to exploit it. Instead, it is only too liable to exploit us. I must not allow myself to be led too far afield by this alluring and important theme. I would merely ask that from time to time we should remind ourselves that the human mind, not only of today but of all periods, and even in its most material manifestations, has a living value for us which, under modern stress, we are too ready to neglect, and that if in particular India neglects her great heritage of culture as expressed in what the Act calls unimaginatively "ancient monuments," she is ignoring and imperilling a great part of the age-long contribution of Indian intelligence to the sum total of world civilization.

I will not now pursue further that aspect of my subject. It is nevertheless one which needs constant emphasis in a period of rapid material and

political change. In Europe, a century of widespread propaganda has only partially opened the eyes of the general public to the real value of the artistry, the craftsmanship, the economic and social environment, of any age but their own. In India there has been practically no propaganda of this type at all. It is to be hoped that the Government committee recently set up to consider, the amelioration of tourist-facilities in India after the war will very greatly improve the means and comfort of Indian travel, and that Indians will at last be able to discover India with at least as much ease as that with which, in the decades before the war, Europeans and Americans were beginning to discover Europe. No one who has seen the lonely city of Mohenjodaro, the fortress and tombs of Agra, the primitive walls and wild jungle where the Buddha and Mahāvīra walked at Rājgṛh, the ancient university of Nālandā whither students came from Tibet, China and Java, the great assemblage of temples looming over the plain at Bhuvaneshwar, or the rock-cut shrines of Mahāballīpuram—none who has once seen these, or a hundred others like these, can fail to feel that India has acquired for him an added dignity, a sense of recurrent aspiration and fulfilment, which must surely come to India yet again.

Let us then admit that, even in a material crisis such as that through which the world is now passing—nay, *especially* in such a crisis—the unique and multifarious memorials of the human mind demand our unceasing care and our understanding

How does the thing called Archaeology come into the picture? In this way Archaeology is a science of interpretation. It is the instrument whereby those unique sets of needs and conditions to which I have referred as the formative factors in each episode of human culture are reconstructed objectively, the instrument, therefore, which enables us, in our own unique environment, to appreciate the varying problems of the mind at other unique points of time and space. It provides the key to dead languages which yet contain living thoughts. It reveals the builder and the sculptor and the painter, the ruler and the merchant and the slave, once more in living conflict with the special problems of which their palaces, their cities, their temples and their tombs are a surviving expression. It is the science of ancient things, but its value lies in the fact that those ancient things are not *old*, they are perennially *new*, they are not dead, they are immortal. There is no more living science in the world than the science of archaeology properly used as an instrument for the interpretation of the human mind.

So much for generalities. I turn now from the higher aim to the immediate means from the function of archaeology to its mechanism. Let us remind ourselves that, in the words of Professor Gordon Childe defining the objects of the science

Archaeology furnishes a sort of history of human activity, provided always that the actions have produced concrete results and left recognizable material traces. It has enlarged the spatial

horizon of history in much the same degree as the telescope enlarged astronomy's vision of space. It has extended history's view backward in time a hundredfold, just as the microscope revealed to biology beneath the surface of gross bodies the lives of infinitesimal cells. Finally, it has altered the content of historical study in much the same sort of way as radio-activity affected chemistry. For one thing, archaeology is largely concerned with practical everyday things, contrivances and inventions like houses, drains, axes, and internal-combustion engines, that in themselves have affected the lives of far more people, and that far more profoundly, than any battle or conspiracy, but that formerly seemed beneath the dignity of scholarly history."¹

Without going into detail, I will beg of your patience for a few minutes while I indicate briefly how this severely practical and objective function is fulfilled by archaeology at the present day. In other words, what is the *technical scope* of modern archaeology?

Today archaeology is indeed in itself a science, but it is above all a synthesis of sciences. Geology, geography, botany, zoology, climatology, physics and chemistry, all contribute to our reconstruction of Man in his Environment. Geology defines the general scene and, by providing some of the raw materials for human industry, helps to control human

¹ V. Gordon Childe, *Progress and Archaeology* (London, 1944), p. 1

distribution Furthermore, the equation of geological phases, such as glaciation and pluviation from one part of the world's surface to another will enable us to equate the development of human types and societies with one another, not only in India itself but also between India and other countries, notably Africa In specially favourable circumstances, laminated geological deposits resulting from the annual melting of the fringe of an ice field have been used as a precise calendar in relation to man though whether such circumstances are likely to obtain in India I am not able to say Again, the analysis of gravels and soils will go far towards determining the conditions under which they were deposited whether by relatively slow water action or by turbulent flood, whether by constant gale or merely by normal breezes In these and other fashions that patent factor in the environment of man, climate, can be in no small measure reconstructed And bearing also on this is the recovery of ancient plant-life, represented by pollen preserved in ancient strata In recent years the science of pollen analysis has yielded remarkable results under suitable conditions and I have not the slightest doubt that if the botanical department of one of our Indian universities took the matter up on the lines adopted so successfully by the University of Cambridge a great deal of useful light could be thrown on the climate and plant-environment of various phases of Indian history

In western America the study of trees has yielded information of a different kind There living trees

still stand where they have stood for something like three thousand years, and the succession of annual growth-rings—comparable with the annual geological deposits to which I have referred—forms a combined time-table and weather-chart, consisting of wide rings for wet years and narrow rings for dry years, succeeding one another in a recognizable climatic rhythm. Not only that, but it has been found possible to equate with definite sections of this ring-scale the rings of trees used in the construction of certain of the prehistoric villages of America and so to extend the precise chronology of a part of that continent far beyond the narrow limits of its written history. I fear that India can scarcely hope to produce the abnormally long-lived trees which are the basis of this method, but the possibility is worth bearing in mind.

Then there is the contribution of the anatomist and the zoologist. I do not wish tonight to embark upon a discussion of that ill-used term "race". It is unnecessary for me to remind this audience that "race" has nothing whatever to do with a particular flag, a particular creed or political system, or a particular territory. There is no such thing as an Indian race or a British race or an Aryan race or an Urdu race or a Muslim race. What then is the definition of "race"? Until a few years ago, the anatomist held the answer. Race, he said—and no one said him nay—is a matter of skull-measurement, colouration, stature. If you were small and dark and long-headed, you belonged to one group of races; if you were tall and fair and

long headed, you belonged to another group, and so on. More recently, the supreme authority of the anatomist in this matter has been disputed, and there is a tendency nowadays to regard stature and colouration and even skull form as too susceptible to the influence of environment to constitute objective data. Instead, the varying composition of the blood holds the field as a primary datum for race classification. The full potentiality of this classification in time and space has not yet been explored, but as a starting point here in the East, a systematic survey of the blood groups of India, carefully mapped, could scarcely fail to produce results of the highest interest and significance.

And this brings me to one of the most important points of all—the question of maps. Even today with all the machinery of modern invention at our command, geography is the final arbiter of human distribution. In the past, it has ruled men with a rod of iron. Save in relation to geography, the history of civilization cannot be rightly understood. The constant cry of every historian and archaeologist should be ‘Put it on the map’. In India we have to confess that that cry has scarcely been heard as yet. A dozen years ago a retired officer of the ICS briefly indicated the importance of the study, with interesting but summary maps.¹ His lead has not been followed. But what a field here awaits the student. India with its rigid

¹ F. J. Richards. Geographical factors in Indian archaeology. *Indian Antiquary* LXII (1933) 23, ff.

boundaries of mountain and forest, its great plains, its formidable escarpments and its central plateau, is an ideal subject for the historical geographer. And I am prepared to prophecy here and now that careful mapping will enlighten much that is at present obscure in the development of Indian civilization. The remarkable though little-explored megalithic culture of southern India will be found to coincide in extent with the Archaean rocks—granite and gneiss—which provide the massive laminations necessary for this crude architecture. And later, in the middle ages, it was this same geological factor that assisted in the evolution of the Southern Style of temple architecture, with its great blocks of stone and its pyramidal corbelled roofs. In contrast, the mediaeval temple-architecture of the North, with its vast Tertiary and Quaternary plains, developed in brick or in small stones brought from a distance; hence the inward projection of each corbelled course of the roof was less than in the South, a higher elevation was inevitable, and the Northern spire was evolved. Thus with the help of maps we can recover something of the physical circumstances under which two of the most remarkable and individual of the products of the Indian genius were first produced. We are not in this context attempting to analyse that genius itself, but we are taking a necessary preliminary step in ascertaining the nature of the stimuli which helped to give it direction.

It would be easy to multiply examples of useful historical mapping. A very obvious case is that

of the cave architecture of India, which might never have come into existence, or would certainly not have reached the extent and importance which it did, but for the wide expanse of suitable rock, the Deccan Trap, in which the great majority of the caves are cut. In turn, the special opportunities provided by this method of construction had lasting effects upon later South Indian architecture far outside the cave-area. Then again, it will probably be found—I throw this out merely as a suggestion—that the natural distribution of precious and semi-precious stones in which there was a wide and famous international trade, will help to explain some of the economic and political problems of the Āndhra and possibly other periods. And yet again, what was the geographical basis of the vaguely delimited Aśokan empire? Much has been written about Aśoka, but by no means the last word has yet been said about the geography of his period. In short, I commend the historical geography of India as a fine study for any young man with an exact mind and a sense of the open air and wide horizons. One word of warning from experience. Some years ago in England an elaborate and much discussed theory was built up in regard to the world wide distribution of megaliths. Unfortunately, the maps on which it was based were of so uncritical a character that relics two thousand years apart in date were grouped together as of the same period, thus completely falsifying essential conclusions. It is manifestly necessary that the constituent elements of a distribution map shall be subjected to a scrupu-

lous scrutiny before they are used as the raw material for history.

Well, gentlemen, I must have wearied you sufficiently with the mechanism of modern scientific archaeology. You will agree with me that the days when archaeology could be dismissed as "the handmaid of history" or as an idler's hobby have now gone by. Archaeology is a science of a peculiarly complex kind, as must be any study relating to so sensitive and volatile a subject as man. It may be doubted, indeed, whether any study of mankind can approximate closely to an *exact* science, in the sense that geology, for example, is an exact science; for the ultimate factor is the human brain, which cannot encompass or completely objectify itself. But the methods of the study can partake, and are increasingly partaking, of those of objective science, and that is the aspect of my subject which I want most clearly to emphasise today.

This brings me to my next point: the necessity for maintaining an objective, dispassionate attitude towards one's evidence. Almost anything relating to the thoughts and deeds of man can be turned by malevolence, self-interest or sheer stupidity into a controversial channel. That this is not a sin peculiar to the European I find evidence, I am sorry to say, in the historical and archaeological literature of India. A recent historical book written by an Indian public man of some distinction and published by an Indian university, concludes with the exhortation: "A time has come when our history must be examined and written by us from

our own point of view, from the point of view of our development and culture, our literature and art, our achievements " That very moderate statement of an aspiration which is sometimes expressed less temperately will warm every true Indian heart, but it will not, I trust and believe, make the slightest impression on any true Indian mind History of course *cannot* be written from *any* " point of view ", without falsification which must deprive it of genuine title to the name

How slippery is the slope of tendencious history, I could illustrate to you by many examples Two will suffice Not long ago a book was published on the Indus Valley culture in which the author sought to traverse Sir John Marshall's view that this ancient Indian civilization was " pre Aryan or pre-Vedic and was therefore not in the direct line of ancestry of the later Indian cultures which are conventionally if unscientifically described as ' Indo Aryan ' or Vedic in origin This does not suit our author or his introducer, it is equally distasteful to his reviewer in a weekly periodical Why have Sir John Marshall's conclusions, cutting off the Indus Valley civilization from the main stream of Indian culture, remained so long unchallenged ? The reviewer has the answer " There is no dearth of scholars in India, he writes, " but slave mentality is so deep-seated in our nature that we swallow whatever the white skinned scholars say But the author has at last ' thrown down the gauntlet ' It is claimed that he has " touched a hidden switch of ancient Indian culture and a

flood of light has emanated revealing a continuous effulgent current of thought of transcendent beauty underlying and unifying the culture of the modern self-deluded children of that ancient glorious people with that glorious culture of their ancestors". In other words, a direct continuity can now happily be claimed between the Indus Valley citizens with their "glorious culture" and the civilization of "Aryan" and modern India. It is a "lucid realistic intuition that revealed to the author the connecting veins under the massive official bondages isolating the Vedic and Indus Valley civilizations

..... . The writer's approach to the subject is mainly historical and formal, no doubt, but..... he has been led to the right spot by what we may call a kindly inner light He has not chosen to bask in the sunshine of the big departmental favour or to burn appeasing incense with others at the altar of high authoritative fawn, in his courageous pioneer quest after Revealing Truth." And so on and so forth. As the representative of "big departmental favour," I can hasten to assure the author and his friends that whether the glorious Indus Valley civilization is or is not the direct parent and begetter of the glories of medieval or modern India has no sort of sentimental interest whatever to the Archaeological Survey of India or to any other scientific body; that the whole problem is one of the objective evaluation of evidence, not of "lucid realistic intuition" or "kindly inner light"; and that if the author's appreciation of the evidence is such as to traverse successfully

the conclusions of Sir John Marshall, no one will be happier than Sir John himself to accept the correction. But science cannot live in a cloud of passion and spurious patriotism, and, as a scientist, the author stands self condemned.

Again less than a generation ago a certain part of India, which shall be nameless, broke out into a sort of rash of "historical" institutions. Certain of those institutions survive today in a reformed and useful shape. But in their earlier days they tended to become the vehicle for caste bickerings and local rivalries which led to a remarkable outburst of tainted "history". "Each of these 'historical schools'" (I am quoting a contemporary account of them) "has its own writers, discovers old papers' favourable to its claims, interprets them to serve its pet theories, and, worst of all, has its own MSS of well known historical works with its own special readings of the significant passages". This sort of thing, gentlemen, I must ask you to believe is not peculiar to India. I could give somewhat similar examples from Europe. But two blacks don't make a white, and I mention these examples as illustrating a virulent, deforming disease which is particularly liable to attack a nation or a science in a period of adolescence, and must be guarded against with an unceasing watchfulness.

In this matter of tendenciousness, let me confess to you that Indian scholarship has not altogether lacked provocation. The earliest modern historical and archaeological scholars in India were many

of them Europeans, such as Sir William Jones or Cunningham or Fergusson. Born and bred in a western environment, filled with the traditions of ancient Greece and Rome, it is natural that men such as these, deep though their sympathy was with Indian culture, should from time to time have referred the achievements of India quite improperly to the touchstone of European thought. On reflection, it is sufficiently obvious that the achievements of Rome or Athens can no more be compared loosely with the achievements of Agra or Pātaliputra than can the Tiber or the Aegean be compared with the Jumna or the Ganges. But to these western scholars, some of them perhaps a little homesick, great architecture meant instinctively the Forum or the Acropolis, great sculpture the Venus of Melos or the Apollo Belvedere. And when we find Fergusson, for example, comparing the Tāj Mahāl with the Parthenon and remarking that "the Parthenon belongs, it is true, to a higher class of art," he is of course talking complete nonsense. In fact, his comparison is a *non sequitur*; he is comparing two incomparable things. I am an Englishman with a classical training; but, when I read a remark such as that which I have just quoted, I find myself reacting from its smug insularity almost as violently as if I were an Indian patriot. Why drag the mind back in such a context to the hard outline of the Athenian temple, rising masculine and sturdy from its rock into the brittle sunshine of Greece? Surely, we may forget that completely and utterly alien scene, and may

be unreservedly content to look upon the gentle Taj shining clear and white under the Indian moon poised lightly on the finger tips of its avenue and waterways, with the noble river beside it and the Indian crowd taking the air happily and incuriously in its familiar presence

And, similarly, under much of the literature relating to the Gandhara school of sculpture runs an implicit—sometimes explicit—valuation of it in terms of its western affinities at the cost of its essentially oriental individuality I am glad to find that my friend Colonel D H Gordon has recently attacked this attitude “Enquiry into the extent that Indian art is laid under contribution to Greek art, he writes ‘has for the most part been so clouded by national and political bias that the wood has been obscured by the trees of controversy’”

Let us then constantly remind ourselves, whether European or Indian that science is impersonal and that archaeology is a science It is not a matter of ‘race or region, or “nation” or colour caste or creed. Like all science, it is objective and international, or rather non national, in its discipline And that brings me to the next point which I wish to make tonight I have referred to the high place of archaeology in that “scale of values” which is the achievement of any complete system of education I have touched upon the mechanism of modern archaeological science I have allowed myself to be led into a brief sermon on the ills of propaganda and politics masquerading under the guise of science It is

time for me to say something of the present needs of archaeology in India, and of the special wants and difficulties of the Indian student of the subject.

First and foremost, it is necessary to recall what I have already reiterated, the *international* quality of all modern science. Unless every student of a branch of science is familiar with recent research and progress in that branch in all parts of the world, he labours under a handicap which will cripple him throughout his work. Here the Indian student suffers under certain initial disabilities. There is in India no adequately equipped central lending library on which the student can draw. There are in my own branch of science many essential books which are not obtainable in India even by one who like myself has all official authority and opportunity behind him, for the very good—or bad—reason that they have never reached our shores. What hope has the poor student in the face of this book-famine? A vital first need is the organization or re-organization of our library system, with some co-ordinating authority such as the Central Libraries Bureau in England.

Even without this primary stumbling-block, the unhappy Indian student will have a rough enough passage. Every student already has to learn two languages; many students have to learn three—their own vernacular, Urdu or Hindi, and English. I do not propose here to enter upon a discussion of that difficult and thorny problem, the respective and proper places of the vernaculars and of English in the general education

of India I would only offer in parentheses this personal view, that the maintenance of the living Indian languages as an integral factor in a general education is a necessity beyond the reach of controversy. At the same time I would stress equally the urgent need, not only for a *lingua franca* such as English, but for a great expansion of linguistic proficiency in the higher education of the country. No branch of science can be adequately studied in the post graduate stage without a knowledge of French, German and (at any rate in the near future) Russian. At present, the number of Indian science students who can read French and German is astonishingly small, the number who can even hope to compete in the field of international science is proportionately small. I would beg of those who, like a certain distinguished university are busily and systematically evolving a new vocabulary of science in Urdu or Hindi to reflect that, in doing so, they are not helping forward Indian science towards the goal of international achievement. Rather, by discarding international terminology and evolving yet a new language of science, they are placing an additional and gratuitous hazard in the path of the harassed student. Without that added complication the linguistic problem alone which confronts the Indian man of science is a formidable one. It is a problem which will have to be tackled with energy and careful thought by those who have at heart the future position of India in the world of science.

But the linguistic problem is only one of several special difficulties which await the Indian student

of science. In England and America there are few students of real ability who are so poor that they cannot find ways and means of seeing something at first hand of the progress of their science in other countries. Universities and other institutions are year by year increasing the number of post-graduate studentships or grants-in-aid to help the needy student on his way. In this endeavour, they are assisted by private benefaction from a great variety of sources. In England, a wealthy soap-manufacturer has endowed an extensive system of "research fellowships" and grants-in-aid. A peer of the realm for several years financed a studentship to the tune of four thousand rupees a year. A manufacturer of artificial silk established and endowed a complete university institute. A newspaper proprietor gave the equivalent of several lakhs of rupees for archaeological fieldwork in England and the Middle East. A cycle-manufacturer spent lakhs on archaeological exploration in Palestine and elsewhere. An elderly lady, vaguely attracted by the work of Sir Flinders Petrie in Egypt and Palestine, gave a university something like two lakhs of rupees towards the establishment of an institute of archaeology. And in America the subvention of science by successful business men, often of no education themselves, is the rule rather than the exception. I will not weary you with a longer catalogue; nor perhaps need I point the moral. In India on rare occasions private benefactors from amongst your wealthy industrialists and merchants have come to the help of art and science. The

names of Tata and of Birla rise to my mind in this context and there are doubtless others. But such enlightened enterprise is still rare, far too rare here. There is still far too pronounced a tendency to look to "Government" for everything, far too little tendency for the successful citizen to shoulder his share of the responsibility. In the United States, the Government does almost nothing for archaeological research in the field. The work is done, and on the whole well done, by universities supported by private benefaction. It is the *citizens* of America not the American Government, that send archaeological expeditions to Ireland, to Turkey, to Syria, to Palestine, to Egypt to Persia, even to India with results of epoch making importance in the advancement of knowledge (and incidentally in the advancement of America). Is it not time that the citizens of India, through India's many universities, sent an occasional expedition into unknown India itself, for the better understanding of their own country's varied and massive achievement? Is it not time that private benefaction enabled the Indian student, and even the mature scholar, to travel freely in the Near and Middle East, Europe and America for the advancement of Indian Science? The sums involved are not large, and they will repay a thousandfold. What a chance for the public spirited citizens of India!

I appeal then, if you will permit me to do so on behalf of the science of India in the present context on behalf of archaeological science in particular, to those who have made their wealth in India,

whether Indians or foreign residents, to begin now the building up of that *tradition of giving* which has been the making of other nations. The poet has said that it is more blessed to give than to receive; but the needy and ambitious Indian student—and there are many of both—will be fully content with the secondary blessing. I myself know Indian students of ability and promise whose future would probably be *made* by an opportunity to secure first-hand contact with the science and the scientists of other countries and to establish their standards of research upon an international plane. On their behalf I have no hesitation in joining the ancient and honourable company of mendicants.

But it is not enough to beg or even to give Indian science, which means the Indian universities, must be prepared to *receive*. They must plan ahead, and have in readiness the machinery wherewith to exploit benefaction when it comes their way. I have referred to the university institutes of archaeology in Europe and America. In spite of opportunity and responsibility unsurpassed in any country in the world, there is today no equivalent university institute, or even department, in the whole of India. Nineteen universities, gentlemen, but not one of them properly equipped for the study of a superb heritage of material culture which, perhaps more than any other single manifestation, represents India to the educated world. Calcutta University has made a courageous and promising beginning but would be

the first to proclaim its needs. One or two other universities run a little archaeology into their teaching of history. But admirable though these tentative efforts be as evidence of good intent, they carry India a very short distance along the paths of international teaching and research. I have already tried to indicate something of the scope of archaeology as a synthesis of natural sciences and humanistic studies. No such synthesis can be secured without organization and without skilled and lively direction. If only *one* Indian university would decide firmly, and carry out its decision stubbornly, to establish an adequately equipped department or institute of archaeology with a laboratory and teaching collections and with immediate and constant access to sympathetic departments of geology, botany, chemistry, and biology it would not merely attain at once a unique position amongst the universities of India but would be in a position for the first time to enter the international field in this science on something like equal terms. Once again I must ask you to forgive me if I utter, on behalf of Indian archaeology, a most earnest call to action.

But allow me to remind you that the benefactor, the university and the student are not in themselves enough. There is a fourth party which is the necessary complement of the other three. That fourth party is the General Public. Science has long burst the bonds of limited patronage. The ultimate patrons of science today are the educated public as a whole—an essential fact which it behoves

the scientist no less than the public to bear constantly in mind. Great scientists are generally also great publicists, in the sense that their work is presented in forms intelligible and palatable to the general reader or listener. Darwin, for instance, or in our own time Jeans, Haldane, Huxley, are "best sellers" And that is as it should be. The scientists should meet the public; and, on its side, the public should meet the scientists. The so-called "learned societies," of which the Royal Asiatic Society of Bengal is an outstanding and venerable example, are a principal channel for such intercourse. In his presidential address to the Royal Asiatic Society of Bengal in 1944, Dr Syamaprasad Mookerjee defined this essential function. "The Society," he said, "by its scheme of publications and public lectures must play an important part in bringing home to the people at large the fruits of investigations of scholars and savants. Without in any way allowing itself to become a machinery for propaganda, it may thus elevate the intellect of the people it serves, broaden their minds and sharpen their curiosity." It is to be hoped that the revived Archaeological Society of Southern India—a society with immense scope—may quickly develop also into an effective instrument of this kind. Orissa, the United Provinces, the Punjab and other parts of India have historical and archaeological societies which are doing, or are capable of doing, useful liaison work. But in a country of such vast dimensions as India, far more is needed in this way. In France and Great Britain nearly every little country-town

has its archaeological society, in one form or another. It is only fair to admit that many of these small societies are scientifically very bad. A surprising number of them, however, are good and from time to time contribute substantive achievement to the science which they represent. And in the aggregate their work is almost wholly worth while in that they implant and foster a genuine interest, however superficial, in the advancement of knowledge. In varying degree, they educate the general public and render it receptive to the work of the scholar. They can help to inculcate that spirit of critical appreciation which is the necessary background of scholarship. And this brings me to my last main point this evening.

No science can long develop healthily in detachment from what I may best call the *common mind* of the day. Just as a country gets the politicians it deserves, so it gets the scientists it deserves. An uneducated country may occasionally produce, by some freak of circumstance, a scholar of high repute. But only an educated and cultivated nation can produce and maintain any considerable body of scholarship, of science. Only such a nation can sustain the *informed criticism* which is the very breath of science. I do not, of course, refer to that pseudo criticism, generally of a political character which one meets from time to time in political gatherings or the less responsible newspapers. I mean the intelligent, constructive criticism which we have a right to expect from a public soundly educated by a system focussed upon a high uni

versity standard. And not only that. The means must exist, or be created, for the constant interchange of new or critical ideas. Here I stand before you as a sinner come to judgment. I have to confess that the Department which I represent has not always gone out of its way to court informed criticism or to interchange ideas. I will go further: I will admit that the Archaeological Survey of India, in spite of its tremendous public responsibilities, has tended to work in a vacuum. It has been a law unto itself—frequently a good law, but by no means infallible. Working in isolation, it has too often lost touch with world-wide research and world-wide standards of research. It has failed adequately to establish contact, as I understand contact, with collateral interests in India itself. And yet, let me repeat, such contacts are the very life-blood of an academic institution such as my Department in effect is. Both it and India have been the losers by this unholy spirit of isolationism, this monopoly. Nothing indeed can be more arid, more impervious to ideas, than a state monopoly. The other night I was re-reading the autobiography of the historian Gibbon, and marked a passage which states the case admirably in his resounding Augustan prose. "The spirit of monopolists," proclaims Gibbon, "is narrow, lazy, and oppressive, their work is more costly and less productive than that of independent artists, and the new improvements so eagerly grasped by the competition of freedom are admitted with slow and sullen reluctance in those proud corporations, above the fear of rival

and below the confession of an error " Gibbon was speaking of the universities of Oxford and Cambridge in the 18th century, I am applying his words to the Archaeological Survey of India in the 20th. But the "proud corporation" which has too long monopolized archaeological research in India comes before you tonight with a changed mind. It comes before you to beg for rivals and to admit its errors. It supplicates you, through your universities, your societies or otherwise to sustain it with the informed criticism of which it has in the past been starved.

By way of encouragement, it has taken two small but, I think, practical steps in the right direction. First it has recently instituted, for the first time in India a technical training school in field archaeology for approved university graduates with appropriate qualifications in history or allied subjects. These graduates fall into two categories: young research students with archaeological ambitions, and students or teachers of history who require, very properly, some first-hand knowledge of the nature of the evidence upon which so much of their earliest history is based.

Secondly in order to broaden the basis of my Department and of the science for which it stands, Government recently accepted the Department's suggestion that an Advisory Board of Archaeology shall be appointed, the function of which is to receive information and to make recommendations covering the whole field of archaeological science in and relating to India. On this Board are represented the State Legislature, the Indian

universities, the principal societies and learned organizations, the Indian States, and individuals selected for their effective interest in the cultural heritage of India. If this new Board does its job conscientiously it can achieve a great deal for the advancement of knowledge in and about India. But it can only achieve a lasting good if it has continuously behind it the active support of the public, the universities, and the Legislature. It is an incentive, not a substitute, for alternative action. It is a spear-point, but it is not the whole army. The danger of appointing a committee is that everyone else is liable then to sit back and go to sleep; and shortly the committee itself follows suit. At the present time, the world re-echoes to the snores of somnolent committees; let us not add to the volume of that gloomy reverberation. Let us rather get busy, now and today, about this matter of India's mighty heritage, which, more perhaps than anything else, is the guarantee and passport of India's future. Let us set to work now, for there is much to do.